5287

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ..... Office No. 5287

LOCALITY

State California

General locality Pigeon Point

Locality to Point Ano Nuevo

1932

CHIEF OF PARTY

Fred S. Peacock.

LIBRARY & ARCHIVES

DATE .....

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Acc. No.

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, *Director*

State: California

DESCRIPTIVE REPORT

~~Topographic~~ / *Hydrographic* *Sheet No.* 5287 5

LOCALITY

Coast of California

Pigeon Point to Point Ano Nuevo

1932

CHIEF OF PARTY

Fred. L. Peacock

U. S. GOVERNMENT PRINTING OFFICE: 1931

5287

Form 537
Ed. Dec., 1930

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
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Acc. No.

REG. NO. 5287

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 5

REGISTER NO. 5287

State California

General locality Pacific Coast

Locality Point Ano Nuevo to Pigeon Point

Scale 1 : 10,000 Date of survey Aug. 27, to Oct. 27, 19 32

Vessel Chartered Launch ROGUE

Chief of Party Fred. L. Peacock.

Surveyed by A. N. Stewart.

Protracted by J.L. dse Ruisseaux and E.A.Foster.

Soundings penciled by E.A.Foster

Soundings in fathoms ~~feet~~

Plane of reference M L L W

Subdivision of wire dragged areas by

Inked by Paul H. Scherr

Verified by Paul H. Scherr

Instructions dated April 4, 19 32

Remarks: The hydrography on this sheet is visual fixed position hydrography. The soundings are hand lead soundings.

U. S. GOVERNMENT PRINTING OFFICE: 1931

applied to chart 5402 - Mar. 1935 - H.S. Bamba

KWW 8/28/92

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET FIELD No. 5

Coast of California,
U.S.C. & G.S.S. GUIDE
1932.

INSTRUCTIONS: Instructions for the hydrography on this sheet are dated April 4, 1932.

LOCALITY: The work on this sheet is the inshore launch hydrography between Pigeon Point on the north to Ano Nueva Island on the south along the California Coast, extending from approximately Latitude 37° 06' to approximately Latitude 37° 11'.

LIMITS: This sheet covers about 11.5 square statute miles of hydrography. It joins Launch Sheet No. 4 on the north, Launch Sheet No. 6 on the south and Ship Sheet No. 44 H-5245 on the west.

CHARACTER OF WORK: The hydrography on this sheet is all fixed position launch hydrography. The soundings were all obtained by the hand lead.

The depth range is from zero to twenty-six fathoms, with very little work beyond the twenty fathom curve.

The line spacing is approximately fifty meters inside the five fathom curve, seventy-five meters to the ten fathom curve, and one hundred twenty-five meters outside the ten fathom curve.

Cross lines are spaced approximately two miles apart.

The position interval in shoaler depths is in general two to two and one-half minutes, in the deeper depths it is in general three minutes, with supplemental positions at radical changes of course and speed.

The scale of the sheet is 1: 10,000.

DATES OF SURVEY: Work on this sheet was begun August 27, 1932, and was concluded on October 27, 1932.

CONTROL: The control for the hydrography on this sheet consisted mainly of topographic signals located by the 1932 topographic

unit of the Ship GUIDE's party. These signals were located by standard topographic methods. Seven hydrographic signals, built over triangulation stations of the 1931 scheme executed by Lieutenant C. D. Meany, plotted on North American 1927 adjusted datum, were used.

TIDE REDUCERS: Tidal reducers for the soundings on this sheet were obtained from two tide stations, as follows:

> From August 27 to September 29 inclusive, and from October 7 to October 11 inclusive; ANO NUEVA portable automatic tide gage was used, with no correction for either time or range.
>
> October 6 and October 13 to October 25 inclusive; SANTA CRUZ portable automatic tide gage was used, with no correction for either time or range.

For further information on this subject the reader is referred to the Season's Tidal Report, which covers all the tidal work of the party on the Ship GUIDE from April 28, 1932, to February 28, 1933.

LEAD LINE CORRECTIONS: It should be noted that considerable trouble was had during the season due to the shrinkage of the leadlines. Lead lines were checked before and after each days work. The lead lines used were mahogany, phosphorus bronze wire center, No.8 braided tiller line; furnished by the Washington office.

BOTTOM CHARACTERISTICS: From approximately the ten fathom curve to shore the bottom is, in general, rocky, and in the southern part of the sheet off Ano Nueva Island a rocky bottom extends to the limits of this sheet. Beyond the ten fathom curve in the north and central part of this sheet the bottom is fine gray sand.

DANGERS AND SHOALS: In the southern part of this sheet off Ano Nueva Island the area is foul to the approximate limits of the sheet.

Passages in and around the shoals in this area are indicated, but the rigid development necessary to make them safe for navigation is not justified by present needs.

Numerous other shoal indications on this sheet were developed.

The position and least depth found on the more important of the many shoals developed are listed below;

Position:		Least Depth found:
Latitude.	Longitude.	Fathoms.
37 09.9	122 22.6	4 1/6
37 09.9	122 22.7	5 4/6
37 10.0	122 22.4	3 5/6
37 05.9	122 20.2	3 2/6
37 10.3	122 22.5	3
37 07.8	122 21.8	7 3/4
37 08.5	122 21.5	5 1/2
37 02.8	122 21.2	5 4/6
37 07.4	122 21.3	5 1/6
37 06.2	122 19.6	1/6
37 05.8	122 19.8	3 4/6
37. 05.9	122 20.5	7 1/4
37 07.1	122 21.1	4 4/6
37 06.3	122 20.3	2 4/6

JUNCTIONS: The junctions with Launch Sheet No.4 and 6, and Ship Sheet No. 44 are very good.

DISCREPANCIES: Because of the character of the bottom where differences in soundings occur it is felt that these are correct and that few, if any, discrepancies occur on this sheet.

It will be noted that a number of changes in recorded angles and fixes in the sounding volumes were necessary in order to have the smooth sheet agree with the boat sheet. The majority of these changes occur during the period "l" to "t" day inclusive, when a new recorder was being broken in. All the changes made appear to be well substantiated and to be minor errors in recording.

Hydrographic signal PIN does not fall on this sheet. This signal was used in two fixes (30 and 31 on 'd' day). These two positions were protracted on smooth sheet No. 4 and transferred to this sheet.

Respectfully submitted,

Lawrence W. Swanson

Lawrence W. Swanson,
Jr. H. & G. Engineer,
U. S. C. & G. Survey.

Respectfully forwarded,
approved:

Fred. L. Peacock

Fred. L. Peacock,
Chief of Party, C & G S.,
Commanding Ship GUIDE.

A. Newton Stewart
Jr. H. & G. Engineer
U S C & G Survey

STATISTICS
to accompany

HYDROGRAPHIC SHEET FIELD NO. 5

Date 1932	Day	Statute Miles Sounding Line.	No. of Positions	No. of Soundings.
8-27	a	9.0	40	123
8-28	b	4.5	19	58
8-29	c	10.1	40	126
8-31	d	7.5	31	83
9-9	e	8.4	40	102
9-11	f	5.1	25	66
9-12	g	8.5	52	145
9-13	h	9.1	78	309
9-14	j	2.3	21	73
		1.2 skiff	37	86
9-15	k	10.4	95	262
9-22	l	6.4	28	93
9-24	m	19.7	102	224
9-25	n	28.3	158	571
9-26	p	5.1	19	76
9-27	q	7.0	47	176
9-28	r	5.3	28	109
9-29	s	15.6	81	297
			11	11
10-6	t	4.7	22	67
10-7	u	4.1	70	135
10-8	v	6.3	35	155
10-10	w	3.5	72	118
10-11	x	12.0	88	279
10-13	y	12.6	88	296
10-21	z	7.8	103	264
10-22	aa	5.4	40	87
10-24	bb	2.8	74	140
10-25	cc	all detached	20	22
10-27	dd	.5	14	25
		223.2	1578	4578

Area: In square statute miles 11.5

LIST OF SIGNALS
to accompany
HYDROGRAPHIC SHEET FIELD NO. 5

TRIANGULATION

Hydrographic name		Location
Evo		Evo 1931
Lite		Ano Nueva Lighthouse 1931
Oil		Oil Derrick 1931
Ano		Ano 1931
Frank		Frank 1931
Pid		Pigeon Point Lighthouse 1931
Pin	Not on this sheet	Pin 1931

TOPOGRAPHIC

Abe	Topographic	Sheet	E
Ban	"	"	E
Bel	"	"	D
Cat	"	"	E
Dog	"	"	E
Don	"	"	E
Gab	"	"	D
Hap	"	"	E
How	"	"	E
Lid	"	"	E
Lin	"	"	E
Lop	"	"	D
Nob	"	"	D
One	"	"	D
Pen	"	"	D
Per	"	"	D
Pole	"	"	D
Pot	"	"	D
Rem	"	"	D
Rap	"	"	D
Red	"	"	D
Rat	"	"	D
Roc	"	"	D
Rot	"	"	D
Silo	"	"	D
Stripe	"	"	D
Tar	"	"	E
Tide	"	"	D
Til	"	"	D
Tip	"	"	D
Tom	"	"	E
Top	"	"	D
Two	"	"	D

FIELD SHEET NO. 5

TIDAL DATA

Ano Nueva, portable automatic tide gage was used from August 27 to September 29 inclusive and from October 7 to October 11 inclusive.

There was no correction for time or range.

M L L W on staff	1.42 feet
H W I	10.39 hours
L W I	4.02 hours
Mean Range	3.69 feet

Santa Cruz, Municipal Wharf, portable automatic tide gage was used on the following days: October 6, 1932, October 13 to October 25, 1932 inclusive.

There was no correction for time or range.

M L L W	3.00 feet
H W I	10.48 hours
L W I	3.91 hours
Mean Range	3.38 feet

STATEMENT
to accompany

HYDROGRAPHIC SHEET FIELD NO 5

Coast of California
U.S.C. & G.S.S. GUIDE
1932

The smooth plotting of this sheet from "a" day through "r" day was done by Mr. J.L.desRuisseaux, civil engineering hand. The protracting was completed and the penciling of sounding thereon was done by Mr. E. A. Foster, civil engineering hand under the direct supervision of Lieutenant L. W. Swanson.

Lieutenant Swanson has drawn the depth curves and verified at least ten per cent of the positions and soundings. The completed smooth sheet has been inspected and is approved. However, in as much as the plotting of this sheet was done by temporary employees, it is recommended that office verification be correspondingly rigid.

Fred. L. Peacock

Fred. L. Peacock,
Chief of Party, C. & G. S.,
Commanding Ship GUIDE.

Oakland, California.
July 22, 1933.

EaK

August 10, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5287

Locality Between Pidgeon Pt. and Ano Nuevo I., California.

Chief of Party: F. L. Peacock in 1932
Plane of reference is mean lower low water, reading
1.4 ft. on tide staff at Ano Nuevo Island
17.8 ft. below B. M. 1.

3.0 ft. on tide staff at Santa Cruz
14.5 ft. below B.M. 2.

Height of mean higher high water above plane of reference is 5.2 feet at Ano Nuevo Island and 5.5 feet at Santa Cruz.

Condition of records satisfactory except as noted below:

Paul T. Whitney

Chief; Division of Tides and Currents

Section of Field Records.

Report on H-5287 — Surveyed Aug. 27-Oct 27, 1932.
Chief of Party. F.L. Peacock — Surveyed by. A.N. Stewart
Protracted by. J.L. des Ruisseaux, E.A. Foster — Soundings plotted by. E.A. Foster
Verified and inked by. P.H. Scherr — Topography inked by Field Party.

1. The records conform to the General Instructions with the exception that rocks are incompletely described. Verification of the rocks awaits arrival of the topographic sheets for this vicinity. ✓

2. The usual depth curves can be drawn. ✓

3. The field plotting was completed to the extent prescribed in the General Instructions ✓

4. The office draftsman was compelled to respace some soundings which had been inaccurately placed. These occurred, for the most part, in the first few days. ✓

Continued

5. The junctions with the adjoining sheets H-5245, on the West, and H-5296, on the North, were satisfactory. The South sheet has not as yet been verified.

6. Numerous errors of recording had been made which, however, had been corrected previously. F. L. Peacock, chief of party, calls attention to this, both in the descriptive report and the records and promises future improvement.

It was surprising to note that hand lead castings were made at depths of twenty to twenty-four fathoms, making it very possible for errors to enter into the sounding. However, the junction with H-5245 was satisfactory.

See additional notes by A. H. Stewart attached to this report.

The sounding of four and two-sixths fathoms ($4\frac{2}{6}$) between 25 and 26 G was omitted because of the too indefinite placing of the sounding.

7. The field drafting was fair, the protracting very well done. In view of the fact that Peacock, Chief of party, called for a rigid check because of new men doing the drafting, it was very well done. However, the day letters were indistinctly drawn and hard to decipher.

Respectfully submitted,

Paul H. Scherr

October 19, 1933.

H-5287

VARIATION OF SOUNDING METHOD IN DEPTHS TOO GREAT FOR ORDINARY HAND LEAD SOUNDING:

The deeper soundings on this sheet were obtained by a slight modification of the usual hand lead sounding.

Whenever the depth became so great that any difficulty was experienced in obtaining vertical lead line casts at regular sounding speed the launch engine clutch was disengaged at the command "Sound", and was re-engaged when the sounding had been obtained. This method was resorted to because of the small amount of work necessary outside the fifteen fathom curve and was particularly feasible in that the launch was equipped with pilot house control which enabled the helmsman to view the operations of the leadsman and control the engine accordingly.

Another consideration was the exceptional ability of the two leadsmen and their consistent cooperation in advising the hydrographer with respect to the proper speed to enable them to obtain vertical soundings under the conditions of depth, wind and sea being encountered.

A fourteen pound lead was used for all soundings outside the ten fathom curve.

Although a hand wire sounding machine was installed on the launch, ready for use, the method detailed above was favored, since in the opinion of the hydrographer it gave better control of the sounding line and was faster.

The regularity with which the engine clutch was manipulated appeared to insure satisfactory accuracy with respect to the spacing of soundings intermediate between positions.

All recorded soundings were made with the lead line vertical and all doubtful soundings were rejected at the time.

Respectfully submitted,

A. Newton Stewart

A. Newton Stewart,
Jr. H. & G. Engineer,
U.S.C. & G. Survey.
Hydrographer.

For further information regarding
these letters see Desc. Rept. H-5296

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5287 (1932)

Point Ano Nuevo to Pigeon Point, Pacific Coast, California
Surveyed August - October, 1932
Instructions dated April 4, 1932 (Guide)

Hand Lead Soundings and Three Point Fixes on Shore Signals

Chief of Party - F. L. Peacock.
Surveyed by - A. N. Stewart.
Protracted by - J. L. dR., E. A. F.
Soundings penciled by-E. A. F.
Verified and Inked by - Paul H. Scherr.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual with the following exceptions:

a. Rocks and reef symbols were not completely transferred to the smooth sheet. These were revised in the office.

b. Evidence that the transfer of topographic signals was checked in the field was lacking since the initials of the checker were not shown on the sheet. This was done in the office and a few signals were found to be slightly off but were not changed, as they did not affect the position of sounding lines.

2. Compliance with Instructions for the Project.

The character and extent of the survey generally satisfy the instructions for the project, with the exception that the area to the west and northwest of Point Ano Nuevo was not completely surveyed.

The instructions (par. 24) do not authorize the use of the hand lead in depths over 15 fathoms, however a variation of the usual method of obtaining hand lead sounding was used in the deeper areas on this survey. (Description of method by A. N. Stewart filed in this descriptive report.) Precautions were taken to insure accuracy and the deeper soundings agree well among themselves and are also in agreement with the soundings from the off shore survey, H-5245 (1932-3).

3. Sounding Line Crossings.

Most of the sounding lines are parallel to the coast and no regular system of cross lines was used. Adjacent sounding lines agree very well in the areas outside the ten fathom curve. In the broken and irregular areas close inshore and the foul area off Point Ano Nuevo, the soundings agree about as well as may be expected in bottom of such irregularity.

4. Depth Curves.

The usual depth curves can be satisfactorily drawn, including most of the 5 and portions of the 2 and 3 fathom curves.

5. Junctions with Contemporary Surveys.

Satisfactory junctions were effected with H-5296 (1932-34) on the north, H-5245 (1932-3) on the west and H-5366 (1932) on the south.

6. Comparison with Prior Surveys.

H-555 (1856).

This is the only previous survey covering this area. As there is no projection on H-555 (1856), a comparison of the two surveys was made by tracing the critical soundings and shoreline from the present survey and laying the tracing over H-555 (1856) and fitting the shoreline. The sounding lines on H-555 (1856) are rather open in some areas and it was found that some important shoals which were missed by the early survey were located by the recent survey. On most all of the shoal indications on H-555 (1856), less depths have been found on the present survey. The shoreline at Point Ano Nuevo has apparently receded considerably and the foul area extending off the point shows some differences. The present survey shows shoaler depths on practically all of the shoal spots in this area. It is impossible to determine the extent of the bottom changes from a study of the shore line in the vicinity of Point Ano Nuevo. In charting the area, however, such soundings from H-555 (1856) can be used to fill in blank areas on H-5287 (1932) wherever agreement between the two surveys exist.

In the deeper areas the two surveys are in general agreement.

The greater part of the area of the present survey is probably not subject to general change since the bottom is rocky and lumpy, however shoaler depths, which need be considered in charting, were found in only three places on the old survey.

a. A 1½ fathom sounding from H-555 (1856), has been added to H-5287 (1932) in Lat. 37°10.76', Long. 122°22.96'.

b. A 4⅝ fathom sounding from H-555 (1856) has been added to H-5287 (1932) in Lat. 37°07.7', Long. 122°21.03'.

c. A 7 and 7½ fathom soundings appear on H-555 (1856) in Lat. 37°06.3', Long. 122°20.6'. These soundings actually originate from H-380 (1853) but could not be found in the records of that sheet. They were added to H-5287 (1932), nevertheless.

A 6 fathom sounding shown on H-555 (1856) in approximate Lat. 37°10.8', Long. 122°24.05' and falling depth of 10 fathoms on the new survey was found to be incorrect when investigated in the records. It should be 10 fathoms.

Small bare rocks just off of Pigeon Point and in Lat. 37°10.1', Long. 122°21.9' appear on H-555 (1856). These rocks originate from T-653 (1854). They were not found on the present surveys, but as notes on T-4800 (1932) indicate the possibility of sunken rocks at these points, they have been added to H-5287 (1932) as sunken rocks.

7. Comparison with Chart No. 5402.

Within the area of the present survey the chart is based on the survey discussed in the foregoing paragraph and contains no additional information that needs consideration in this review.

8. Field Plotting.

The field plotting was satisfactorily done. Some errors in the early part of the work were evidently due to the inexperience of the plotter.

9. Additional Field Work Recommended.

This survey is a little incomplete in some of the areas close inshore, which are not of great importance. Since the more important areas slightly off shore are now being wire dragged, no additional work is required.

10. Superseding Old Surveys.

Within the area covered, the present survey, with the indicated additions from previous surveys, will supersede the following survey for charting purposes:

H-555 (1856) In part.

11. Note to Compiler.

Preliminary depths located by the wire drag party operating in this area have been received. (Chart Letter No. 708, 1934). Four of these fall within the limits of the present survey but have not been added to H-5287 (1932). They should be charted, however, pending receipt of the wire drag survey.

12. Rocks on Boat Sheet.

Quite a large group of rocks awash, shown on the boat sheet in pencil in approximate lat. 37°08.35', Long. 122°20.77', have been added to the smooth sheet. The center rock was located by cuts at Pos. 72-73s and a note in the record reads "Center of group of rocks awash." On the strength of this note. The rock symbols shown on the boat sheet were transferred to H-5287 (1932).

13. Reviewed by - R. J. Christman and R. L. Johnston, December, 1934.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green,
Chief, Section of Field Records.

Chief, Division of Charts.

Chief, Section of Field Work.

Chief, Division of H. & T.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5287

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	1578
Number of positions checked	80
Number of positions revised	—
Number of soundings recorded	4578
Number of soundings revised	103
Number of signals erroneously plotted or transferred	✓

Date: October 18, 1933.

Cartographer: Paul H. Scherr